REMARKS

This is intended as a full and complete response to the Office Action dated June 28, 2004, having a statutory period for response set to expire on September 28, 2004. Please reconsider the claims pending in the application for reasons discussed below.

Claims 1 and 2 are as originally presented. New claim 3 has been added. Support for the new claim can be found throughout the application, and more particularly at column 2, line 49 to column 3, line 38; column 3, line 65 to Column 4, line 3; and claim 1 of parent US application 10/215,698, now US patent 6,373,827 B2.

Claim 1 and 2 have been rejected under 35 USC 102(b) as being anticipated by El Sharkawi, et al. The examiner states El-Sharkawi et al: "discloses a reactive power compensator comprising determining reactive power in the motor windings by using means 50, voltage detectors 54, current detectors 58, means 70; and maintaining a switch 114, which is connected between a power supply and an inductive load in a non-conducting state based on the determined reactive voltage." Applicant submits the above analysis is incorrect, and that this reference neither anticipates nor suggests the invention claimed herein.

El-Sharkawi is directed to a reactive power compensator in which a series of separate compensation capacitors 112 are selectively and independently connected to each of three power input lines 52a, 52b, and 52c carrying electrical power from a remote generator to an inductive load. The introduction of a capacitive load (where current leads voltage) affords capacitance compensation for the induced effects of the inductive motor load (where voltage leads current). Switching circuits 114 are used to regulate the connection of the selected capacitors to lines 52, the switching circuits connected in series and between the compensation capacitors and ground (See box 68 of Fig. 1, Fig 17C, item 350, and specification, Col. 6, lines 44-46.).

The interoperation of the compensation capacitors and switching circuits are described, inter alia, at Col. 13, lines 44 - 65. Details of the operation of switching block 68 containing switches 114 are illustrated at Figure 13, and are as generally described

at Col. 16, line 43-Col. 17, line 59. As noted above, the switching circuits (i.e. relays) 114 are used to switch the capacitors in and out of the circuit. It is only when these relays are made "active" [a condition of current flow (see Col 4, lines 41-46, Col 16, lines 50-55)] that the capacitors are placed on line to provide reactive power compensation to the system. The number of capacitors made "active" is in turn determined using computer means 70, the number of required capacitors determined by the measured VAR.

Nowhere does El-Sharkawi teach the use of SSRs to control the flow of power from a power source to an AC motor, whereby a calculated VAR is used to determine the length of time solid state relays positioned in-line between the power source and the motor are to be maintained in a non conducting state to interrupt the flow of power. The SSRs of El-Sharkawi are used for an entirely different purpose that is to bring capacitors online, in parallel to a motor winding. Notably, by way of illustration, in the system of the reference, controller means 70 is used to calculate the number and selection of capacitors to be activated (See Col 22, lines 4-22), not to calculate a time period in which SSRs (positioned in line between a power source and a motor) are to be maintained in a non-conducting state.

In summary, El-Sharkawi fails to disclose a method to control power input to an AC induction motor from a power supply using a SSR connected in series between the power supply and an induction motor, a method in which the time the SSR is maintained in a non conducting state is determined in accordance with analysis of the measured VAR. Instead, El-Sharkawi seeks to reduce VAR by selective introduction of capacitance in parallel to a motor. Applicant reduces VAR by delaying power flow for a period of time based on a calculated VAR. These two approaches are completely different, the one not suggestive of the other. Accordingly, applicant submits that the Examiner's reliance upon El-Sharkawi is in error, and that Claim 1 in its present form is in condition for allowance.

Claim 2 is dependent on claim 1. Since Claim 1 is in condition for allowance, it is believed that Claim 2, as presently presented, is likewise in condition for allowance. Newly added Claim 3, which includes similar limitations regarding the maintenance of

an SSR in series between a power supply and an induction motor, and the maintaining of the SSR in a non-conducting state for a period of time based on the measured VAR, is for the same reasons as set forth with respect to claims 1 and 2, believed to be allowable.

Respectfully submitted,

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